

ABSTRACT OF THE DISCLOSURE

Protein S is a significant neuroprotectant when administered after focal ischemic stroke and prevents hypoxic/re-oxygenation injury. Purified human plasma-derived or recombinant protein S improves motor neurological function after stroke, and reduced 5 brain infarction and edema. Protein S also enhances post-ischemic reperfusion and reduced brain fibrin and neutrophil deposition. Cortical neurons are protected from hypoxia/re-oxygenation-induced apoptosis. Thus, protein S and variants thereof are prototypes of a class of agents for preventing injury of the nervous system. In particular, a disease or other pathological condition (e.g., stroke) may be treated with such agents 10 having one or more protein S activities (e.g., anti-thrombotic and anti-inflammatory activities, direct cellular neuronal protective effects) although the latter activities are not be required.

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(71) Applicants (for all designated States except US): SOCRATECH L.L.C. [US/US]; 3643 Lenawee Avenue, Los Angeles, CA 90016 (US). THE UNIVERSITY OF ROCHESTER [US/US]; 518 Hylan Building, Rochester, NY 14627 (US). THE SCRIPPS RESEARCH INSTITUTE [US/US]; 10550 North Torrey Pines Road, La Jolla, CA 92037 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): ZLOKOVIC, Berislav, V. [US/US]; 3345 Elmwood Avenue, Rochester, NY 14610 (US). GRIFFIN, John, H. [US/US]; 13924 Boquita Drive, Del Mar, CA 92014 (US).

(74) Agent: TANIGAWA, Gary, T.; Nixon & Vanderhye P.C., 1100 North Glebe Road, Suite 800, Arlington, VA 22201-4714 (US).

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(57) Abstract: Protein S is a significant neuroprotectant when administered after focal ischemic stroke and prevents hypoxic/re-oxygenation injury. Purified human plasma-derived or recombinant protein S improves motor neurological function after stroke, and reduced brain infarction and edema. Protein S also enhances post-ischemic reperfusion and reduced brain fibrin and neutrophil deposition. Cortical neurons are protected from hypoxia/re-oxygenation-induced apoptosis. Thus, protein S and variants thereof are prototypes of a class of agents for preventing injury of the nervous system. In particular, a disease or other pathological condition (e.g., stroke) may be treated with such agents having one or more protein S activities (e.g., anti-thrombotic and anti-inflammatory activities, direct cellular neuronal protective effects) although the latter activities are not be required.